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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

APPIAH, CHARLES NANA

ART UNIT	PAPER NUMBER
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2682

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/627,254

Applicant(s)

FARROW ET AL.

Examiner

Charles Appiah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 4, 6, 7 and 13 are objected to because of the following informalities:

It appears "communications port" on line 2 of claim 4, line 7 of claim 5, line 8 of claim 6, and line 3 of claim 7, should be changed to "communication port" to maintain consistency of terminology as well as proper antecedent basis in the claims.

Appropriate correction is required.

With respect to claim 13, there appears to be a typographical omission of the claim upon which claim 13 depends. To expedite prosecution examiner is assuming claim 13 depends on claim 5. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bottoms et al. (5,711,012)** in view of **Jacobs (5,898,920)**.

Regarding claim 1, Bottoms discloses a radio (100) for sending and receiving electronic messages from a data terminal equipment (DTE 10) through a cellular phone (200), the radio having a microprocessor (125) and a connector (11) for connecting to the portable computer, the system comprising: a modem (135, 145) incorporated into the radio and having means for connecting the data terminal equipment (DTE port 115), a communication port (PSTN port 105) having access to the modem (149) and the cellular telephone (166), the communication port having a controller (125) for communicating transmission signals to the radio (see col. 4, lines 14-19), whereby the radio transmits information that monitors a communication connection for data transmission between the data terminal equipment and the cellular telephone through the modem, and the communication port transmits information about the status of the connection to the radio (see col. 4, lines 19-56). See Figs. 1-3. Bottoms thus read on the invention as claimed except the feature of the data terminal equipment being specifically a personal digital assistant.

Jacobs discloses a system for providing data communications between a dual mode radiotelephone and an electronic accessory such as a personal digital assistant (see Figs. 1-3). Jacobs shows the capability of providing data communications in two

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types of radiotelephone networks through a modem coupled to the PDA (see col. 1, lines 55-65, col. 3, lines 27-29), by enabling the electronic accessory to go from digital cellular radiotelephone system to an analog cellular telephone system without changing or reconfiguring the connections between the radiotelephone and the accessory (see col. 1, lines 51-53, col. 48-55).

It would therefore have been obvious to one of ordinary skill in the art to use a PDA in place of the data terminal equipment of Bottoms in order to provide the advantage of data communications without having to change or reconfigure the connections between the cellular telephone and the PDA as taught by Jacobs.

Regarding claim 2, Bottoms further teaches wherein the modem further comprises AT commands that are decoded and acted upon by the radio (see col. 4, lines 14-56).

Regarding claim 4, Bottoms further teaches wherein the communication port disables predetermined functions of the radio during communication between the phone and the PDA so as not to interfere with the data transmission (feature of signal set 111 conveying the transmitted and received signals with no voice transmission as CPU 125 of the SVD modem disables the PSTN port 105, see col. 4, lines 14-23).

5. Claims 3, and 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bottoms et al** in view of **Jacobs** and further in view of **Pardo (6,266,539)**.

Regarding claim 3, Bottoms and Jacobs meet all limitations as applied to claim 1 above. Bottoms further show the use of AT commands (see col. 4, lines 14-27) but the

combination of Bottoms and Jacobs fail to teach that the AT command further comprise a dial command, a hang-up command and an extended results code command.

Pardo discloses a docking arrangement in conjunction with a basic telephone circuit that exploits all of the resident intelligence of a PDA in conjunction with the telephone circuit (see col. 3, lines 6-62). Pardo further shows the use of control commands such as dial, pick up, hang up, get line status, get data (see Pardo col. 7, lines 50-67),

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Pardo with the system of Bottoms and Jacob in order to ensure the appropriate commands for the proper carrying out of desired communication functions.

Regarding claim 5, Bottoms and Jacobs meet all limitations as applied to claim 1 above. In addition, Bottoms further teaches a user having the capability of performing "keyboard" dialing from the DTE or by directly pressing the keys of a keypad associated with the telephone handset (see col. 4, lines 8-13), reading on the capability of sending a phone number from the PDA to the radio, sending the phone number from the radio to the cellular phone, dialing the phone number from the cellular phone. Bottoms teach the establishment of an audio channel connection between the phone and the modem (see col. 4, line 57 to col. 4, line 30). The combination of Bottoms and Jacobs fail to explicitly teach monitoring for a loss of a connection or a hang up signal from the PDA and ending the audio connection upon loss of connection or receipt of the hang up signal.

Pardo discloses a docking arrangement in conjunction with a basic telephone circuit that exploits all of the resident intelligence of a PDA in conjunction with the telephone circuit (see col. 3, lines 6-62). According to Pardo and as illustrated in Fig. 1-3a, the docking station has the capability of being provided with an IR or RF data exchange facility (see col. 5, line 7, lines 17-29) and also includes a modem to implement the exchange of digital information over the telephone line (see col. 5, lines 52-60), with the protocol between the PDA and the modem enabling the PDA to control the modem to get event signals and data from the modem using control commands such as dial, pick up, hang up, get line status, get data, col. 7, lines 49-67).

It would therefore have been obvious to one of ordinary skill in the art to combine the above teaching of Pardo with the system of Bottoms and Jacobs in order to enable the exchange of control signals for implementing desired communications functions, such as terminating an audio channel connection, which exploits the intelligence of the PDA while requiring only basic and inexpensive hardware interface between the PDA and the user's telephone as taught by Pardo.

Regarding claim 6, Bottoms further discloses the step of transmitting a phone number inherently further comprises the step of monitoring the connection between the PDA and the modem for a signal indicating data terminal ready by way of the radio including verifying the availability of the phone upon receipt of the data terminal ready signal (see col. 4, lines 8-13), and disabling all other radio functions by way of the communication port upon confirmation that the phone is available (see col. 4, lines 14-

24), while Pardo teaches monitoring the personal PDA for receipt of the phone number to be dialed (feature of "get line status" col. 7, lines 49-67).

Regarding claim 7, the combination of Bottoms, Jacobs and Pardo will inherently meet the step of monitoring the PDA for receipt of a phone number to be dialed further comprises the step of sending a signal to the communication port to terminate the audio channel connection after a predetermined period of time elapses without receipt of a phone number as taught by Pardo by the capability of the docking station to be operational when the power supply is disconnected (see col. 6, lines 32-56).

Regarding claim 8, Bottoms, further show the step of verifying the availability of the phone upon receipt of the data terminal ready signal including monitoring the PDA for a data terminal ready (feature of disabling voice encoder and voice decoder, col. 4, lines 14-23, from Bottom), while Pardo shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs and Pardo fail to explicitly teach the steps of specifically displaying a message on the radio indicating the phone is unavailable when the phone is unavailable, continuing to monitor the PDA for a data terminal ready signal and waiting a predetermined period of time before resuming the step of verifying the availability of the phone.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the

phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claims 9 and 10, Bottoms shows control processor 240 signals the cellular transceiver to transmit and receive signals via lines 149 and 166 respectively during "voice-only-cellular mode" and "voice-only-PSTN mode" indicating the a determination that a computer connection does not exist (col. 3, lines 12-34), and terminating the audio channel connection by the disabling of the voice encoder and voice decoder, (see col. 4, lines 14-23), but the combination of Bottoms, Jacobs and Pardo fail to specifically teach removing power from the modem in the absence of a data terminal ready signal or determining a computer connection does not exist, terminating the cellular phone call, and waiting for a predetermined period of time before resuming the method at the step of verifying the availability of the phone. However, since Bottoms discloses bypassing the modem during the voice-only-cellular mode it would have been obvious to one of ordinary skill in the art to ensure the removal of power to the modem in the absence of a data terminal ready signal as well as terminating undesired communications such as terminating the cellular phone call, since this will ensure avoiding wasting communication resources such as power to the modem when not needed before resuming the step of verifying the availability of the phone.

Regarding claim 11, Bottoms as modified by Jacobs and Pardo further shows determining the status of the phone and the status of the modem (by the use of control commands (see Pardo col. 7, lines 54-67).

Regarding claim 12, the combination of Bottoms, Jacobs and Pardo shows the step of determining the status of the phone and modem further comprises the steps: of determining either a phone or the modem are not connected (see Pardo col. 7, lines 50-67), and Pardo further shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs and Pardo fail to teach displaying a message on the radio that the call cannot be completed, terminating the audio connection and waiting for a predetermined period of time before resuming the method at the step of verifying the availability of the phone.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claim 13, the combination of Bottoms further discloses the step of determining the existence of a computer connection for the transfer of data between the PDA and the cellular phone (data-only-cellular mode, col. 4, lines 14-23), Pardo further shows the capability of displaying on the telephone screen, features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs and Pardo fail to explicitly teach the step of displaying a message on the radio indicating the transfer of data is taking place.

However, since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications without wasting communication resources unnecessarily.

Regarding claims 14-16, Pardo further shows the use of control commands such as dial, pick up, hang up, get line status, get data (see Pardo col. 7, lines 50-67), and Pardo further shows the capability of displaying on the telephone screen features such as dialing status, redialing status, receiving a call, caller log, etc., see Figs. 4-9), but the combination of Bottoms, Jacobs and Pardo fail to explicitly teach the step of monitoring for a loss of connection or a hang up signal from the personal digital assistant including the step of displaying a message on the radio that the call is complete or incomplete upon receipt of a hang up signal from the PDA as well as determining that there is an absence of signal traffic for a predetermined period of time and terminating the audio channel connection.

However, since Bottoms shows disabling the voice encoder and voice decoder in the "data-only-mode" and since Pardo shows the capability of displaying dialing messages, it would have been obvious to one of ordinary skill in the art to provide for the display of any desired messages including the availability or unavailability of the phone for carrying out desired communications including terminating the audio channel connection when there is absence of signal traffic for a predetermined period of time without wasting communication resources unnecessarily the combination of Bottoms, Jacobs and Pardo.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Funk et al. (6,026,119) discloses wireless packet data communications modem arranged with computing devices.

Kim (6,317,425) discloses a data synchronizing method for a radio multi-terminal communication system including a cellular phone and a PDA.

Bernard (5,497,339) discloses a portable apparatus for providing multiple integrated communication media.

O'Sullivan (5,640,444) discloses a system for connecting a computer to both cellular and landline telephone systems.

Virtuoso et al. (5,594,952) discloses a device for integrating between voice and data radio communication.

Lintula et al. (5,884,190) discloses a method for making data transmission connection between a computer and a cellular telephone.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Appiah whose telephone number is 703 305-4772. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703 305-6739. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703 308-6296 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 306-0377.

CA
April 15, 2003


CHARLES APPIAH
PATENT EXAMINER